The choice of conserving or removing the ovaries at the time of hysterectomy for benign conditions

Introduction

When a woman decides to have a hysterectomy (removal of the womb), it is important for her to consider whether she should keep the ovaries, or have one or both of them removed at the same time as the hysterectomy. To remove ovaries at the time of a hysterectomy will only add a small amount of operation time and increase the risks of the hysterectomy operation minimally. This leaflet will provide information that enables the right decision to be made by the woman.

What are ovaries?

Ovaries are two small organs situating deep in the pelvis on either side of the womb and contain a number of eggs. In women of childbearing age, one egg is usually released from one of the ovaries each month. This egg then travels into the fallopian tube where it may be fertilised by a sperm to form an embryo, which then develops to become a baby in the womb.

During the development and following release of the egg, the ovary produces a host of hormones, the most important of which are oestrogen and progesterone. These are the hormones that cause changes of the endometrium (the inside lining of the womb) and the subsequent period (providing fertilisation of the egg has not occurred). These hormones are also important in many other aspects of a woman's health. For instance oestrogen helps to maintain the bone thickness of the skeleton. It is also believed to be beneficial to the heart, skin and various other organs.

What are natural and artificial menopause?

Each woman is born with a large number of eggs in the ovaries. As a girl matures to become an adult, and as she ages, the number of eggs gradually declines. Eventually, when no more eggs remain in the ovaries, the woman will go through the menopause (or commonly known as ‘the change of life’) and eventually stop having menstrual periods. The production of hormones will also cease. The age at which this happens varies from one woman to the next, with some reaching the change at an early age (e.g. early thirties) while others not having their menopause until their mid-fifties. The average age of the natural menopause however is between 50 and 51.

Removing both ovaries at the time of hysterectomy or at any other time will lead to the menopause immediately - the so call artificial or surgical menopause. The menopause is therefore brought on earlier and may have short and long-term health consequences.

What are the effects of the menopause?

Early Effects

The early effects of the reduced hormone levels are symptoms that affect most women. The most common symptoms are hot flushes and sweats. Some also complain of headaches. A few women may also have psychological symptoms like tiredness, poor concentration and memory, lack of confidence, loss of interest in sex, and mild degree of depression.

Most of these symptoms will improve with time, but it varies from one individual to another how long they will last. In addition, there may be some physical symptoms due to the lack of

oestrogen on the skin and other organs of the pelvis. These include vaginal dryness (which may lead to painful intercourse) and impaired bladder control.

Long-term effects

The long-term effects are caused essentially by the reduced oestrogen level in the body. The important effects are mainly those on the bony skeleton and on the heart and circulation. These effects usually take several years to develop.

Effects on the skeleton - A change in bone chemistry results in a slow progressive loss of bone mass. This leads eventually to brittleness of the bones (osteoporosis) in a large minority of older women. The main consequences are increased risks of fractures of the spine and wrists in their 50's and 60's, and of hip fractures in their 70's and 80's.

Effects on heart and circulation - The effects of the menopause on the heart are complex, but the net effect is a progressive increase in the rate of coronary heart disease and heart attacks that are much less common before the menopause. There is also evidence to suggest that there is increased risk of 'strokes' and development of dementia after the menopause.

What are the ways of reducing the effects of the menopause?

The most common way to reduce the immediate symptoms and the long-term effects of the menopause is the use of hormone replacement therapy (HRT).

HRT is a form of drug treatment. It is designed to counteract the effects of the reduced oestrogen hormone levels. It consists of oestrogen, the principal female sex hormone. In women who still have their wombs, another hormone, progestogen, is added for part of the monthly cycle in order to prevent development of abnormality of the lining of the womb. In women who have had a hysterectomy, the progestogen is not required and thus reducing the possibility of side effects occurring.

HRT will relieve most of the symptoms of the menopause. Occasionally, it takes time to find the right formula and dosage of HRT before the menopausal symptoms are relieved.

HRT will also reduce the chance of developing osteoporosis and 'strokes'. There is also evidence suggesting that HRT may reduce the risk of developing dementia. Current evidence however does not support any beneficial effect of HRT on heart disease.

The side effects of HRT include abdominal bloatedness, breast fullness, slight weight gain, water retention, headaches or migraines, and skin rashes. These side effects are reduced in women who do not need the progestogen component in their HRT (that is, women who have had a hysterectomy).

There are risks associated with taking HRT. In general, the benefits of HRT are considered to outweigh its risks.

The risks of HRT include the increased chance of developing thrombosis. This is the occurrence of clots in the veins of the legs, which may travel to the lungs causing serious consequence. The extra risk of thrombosis in HRT users, compared with women who are not on HRT, was estimated to be 4 per 1000 women per year.

Other risks associated with HRT are increased only after long-term use, that is after at least five years of use. These risks include the chance of developing breast and womb cancer. The increase in risk of developing breast cancer is only marginal but may be higher in women with a

strong family history of breast cancer. By removing the womb at the time of hysterectomy, the risk of womb cancer is virtually eliminated.

What are the advantages and disadvantages of conserving (keeping) the ovaries?

When the ovaries are not removed at the time of the hysterectomy, one would expect them to continue to function normally and produce the usual amount of female hormones. The woman will therefore not need to take HRT, avoiding the side effects and risks of HRT, until perhaps when she reaches the natural menopause.

However, it has been shown that the natural menopause may come earlier in a woman who has had a hysterectomy compared to one who has not. It would seem that the menopause might be brought on some four years earlier, on average, by the hysterectomy. This may be related to the interference of blood supply of the ovaries when a hysterectomy is performed.

Women who have had one ovary removed and one conserved tend to have an increased chance of early menopause, compared to when both ovaries are conserved.

After a hysterectomy when both ovaries are conserved, a woman may also develop the so-called ‘ovarian retention syndrome’ or ‘residual ovary syndrome’. This is the occurrence of pelvic pain with or without pain with intercourse and other symptoms, some two to eight years after the initial hysterectomy. This syndrome is believed to be due to the development of benign cysts and adhesions (scar tissues) of the ovaries. It happens in up to 5% (one in 20) of women who have had a hysterectomy when one or both ovaries are conserved.

It is also more common in women who have had a hysterectomy before they reach the age of 40. Most of the women who suffer from this syndrome may require one or more operations to relieve their symptoms. These additional operations may be difficult and carry increased risks of injury to other organs in the abdomen, including the bowel, bladder and ureters (ureters are tubes that drain urine from the kidneys to the bladder).

What are the advantages and disadvantages of removing ovaries?

The main advantage of removing ovaries at the time of hysterectomy is the avoidance of problems that may arise from any retained ovaries. Although ovarian cancer only occurs rarely after hysterectomy at a risk of one in 300 to one in 1,000, the removal of ovaries will almost

completely eliminate this risk. It will also prevent the development of ‘ovarian retention syndrome’ which is explained above, thus avoiding future surgery.

As mentioned earlier, the removal of the ovaries will render the woman immediately menopausal, leading to a sudden lack of female hormones, especially oestrogen. In most women who have hysterectomy for benign conditions, it is advisable to consider taking HRT for health reasons that are explained above. It should be borne in mind that HRT does occasionally have side effects and risks, and a few women may not be able to tolerate the side effects of HRT. In women who have had their ovaries removed and who cannot tolerate HRT, there are serious long-term health consequences.

What are the factors to be taken into account when considering removal of ovaries?

Age
The closer a woman is to the expected age of menopause, the less advantage there is of keeping the ovaries, as the ovaries are not expected to function for long after the hysterectomy. There may therefore be more justifications for removing the ovaries in these women.

On the other hand, conserving ovaries in younger women is associated with increased chance of 'ovarian retention syndrome', although the chance of this happening is small.

There is no age at which the ovaries must be removed.

Menopausal status
For women who have gone through their 'change of life', the usual advice is to remove the ovaries at the time of the hysterectomy, as the ovaries do not serve any significant purpose after the menopause.

Unfortunately, in women who have not gone through the menopause, it is impossible to predict accurately when the menopause will arrive. However, women with infrequent periods, hot flushes, night sweats may well be approaching their menopause.

The presence of these 'menopausal' symptoms may suggest the ovaries are nearing the end of their functional capacity, and therefore removing them may not have significant consequences.

Family and personal history
If there is a strong family or personal history of osteoporosis, removal of ovaries may increase the chance and severity of the condition. HRT will be strongly recommended in women with this history.

As the chance of coronary heart disease is increased after the menopause and that the current understanding is that HRT does not provide protection against heart problems (in fact a recent study suggested that HRT may increase the chance of developing heart

problem by a very small margin, although this is not confirmed by other studies) young women with personal or strong family history should consider keeping their ovaries.

Women with a strong family history of breast cancer should consider the increased risk of this condition that is associated with the long-term use of HRT. Retaining the ovaries would avoid this risk.

Women with a strong family history of cancer of the ovary may want to have their ovaries removed to reduce their chance of developing this condition.

Willingness to use HRT
Some women do not wish to take any form of medication for whatever reason. Although HRT can be given in a variety of ways, for instance tablets, patches, gel and implants, it may not agree with a few women. In these women, especially if they are young, it may be advisable to leave the ovaries so that they would not run the risk of a lack of female hormones.

Presence of other conditions
In the event when the hysterectomy is performed for a malignant condition like cancer of the body of the womb, it is usually advised to remove the ovaries at the same time.

In women with endometriosis (a benign condition in which the inside lining of the womb occurs outside the womb and which can cause pain and menstrual problems), conserving the ovaries may lead to further development of residual endometriosis, thus causing symptoms after the hysterectomy.

The presence of cysts (benign or suspicious) may influence the decision regarding removal of the ovaries.

Other considerations

A woman who wants to conserve her ovaries should also consider the possibility of an unexpected finding, at the time of the operation, of one or both ovaries appearing abnormal and suspicious of cancer. It should be pointed out that naked eye appearance of an ovary might be suggestive but not conclusive of cancer. Sometimes, a suspicious looking ovary may turn out to be entirely normal. Therefore it is important for the woman to let the surgeon know of her wishes before the operation if this situation arises.

Unexpected discovery of endometriosis sometimes happens during hysterectomy. The development of endometriosis depends very much on the oestrogen hormone that is produced by the ovaries. Removal of both ovaries with hysterectomy is a definitive treatment for endometriosis but there are other forms of treatment available. If endometriosis is discovered unexpectedly, particularly if it involves one or both ovaries, the woman should have decided beforehand whether to have the ovaries removed or not.

Conclusion

When a hysterectomy is performed for a benign condition, the choice of whether to remove or keep the ovaries rests with the woman herself, with the help of the gynaecologist. This information leaflet aims to clarify some of the complex issues associated with the removal of ovaries at the time of hysterectomy. Any queries concerning any of the points raised in this leaflet should be discussed with the gynaecologist before the hysterectomy.

Hand hygiene

The Trust is committed to maintaining a clean, safe environment. Hand hygiene is very important in controlling infection. Alcohol gel is widely available at the patient bedside for staff use and at the entrance of each clinical area for visitors to clean their hands before and after entering.

Other formats

If you require any of the Trust leaflets in alternative formats, such as large print or alternative languages, please contact the Equality and Human Rights Department.

Tel: 01424 755255 Ext: 2620

After reading this information are there any questions you would like to ask? Please list below and ask your nurse or doctor.

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Reference

The following clinicians have been consulted and agreed this patient information:
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The directorate group that have agreed this patient information leaflet:
Guideline Implementation Group

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